

**A NEW RHABDOPTERUS FROM TEXAS
(COLEOPTERA, CHRYSOMELIDAE).**

By H. S. BARBER, Bureau of Entomology and Plant Quarantine,
Agricultural Research Administration, United States
Department of Agriculture.

Except for the few samples mentioned herein very little new information on *Rhabdopterus* has come to notice since my discussion in 1943 (Bul. Brooklyn Ent. Soc. 38: 111-120) of the confusion and uncertainties found in the poorly preserved and otherwise inadequate samples from our area. Two samples from San Antonio, Tex., received through routine official channels in 1943 and 1946, followed by better samples from Menard, Tex., include males so well preserved in alcohol that when dissected the obvious peculiarities of their aedeagi prevent their identification as *R. praetextus* (Say), which they otherwise resemble. These differences are indicated in the accompanying diagrams and offer almost the only characters observed which seem of value for identification.

Concepts of specific or subspecific status of superficially similar but distinguishable forms are changing. The relative constancy in the form of the aedeagus of *praetextus* throughout its great area of habitat seems to exclude the San Antonio samples, although *praetextus* appears to be abundant from the mouth of the Rio Grande to Quebec. The following appears to be the seventh species of *Rhabdopterus* distinguishable in the material now available, but our area is still very inadequately sampled.

***Rhabdopterus bottimeri*, n. sp.**

Very similar to *R. praetextus* (Say). Differs in the form and proportions of the aedeagus, which is longer and apparently narrower with the produced apical process longer and concave with a slight median carina near tip as indicated in figure 1, D. In the aspect shown in this figure the width is distinctly less than half (only 3/7) of the length from base of dorsal sclerotization to base of the apical process, whereas in *praetextus* the width is distinctly more than half (about 3/5) of its length. The legs and antennae pale, the latter rarely showing infuscation of joints 7, 10, and 11, as in related species, the hind tibia relatively longer, more curved and narrower in middle third, more abruptly broadened apically, measuring, length 1.7 mm.; width at apex 0.3, at base 0.15, at middle 0.18, whereas in *praetextus* these measurements are 1.45, 0.22, 0.12, 0.18 respectively. Length 5-6 mm., width across humeri 2.5-3 mm.

Type ♂, 31 ♂ and 48 ♀ paratypes, Menard, Tex., April 28, 29, May 1, 2, 10, 26, 28, 1946, most of them from *Cephalanthus occidentalis*, several on *Polygonum* sp., a few on sycamore and willow, L. J. Bottimer; 3 ♂ and 2 ♀ paratypes on rose leaves and flowers, San Antonio, Tex., April 8, 1946, Wm. R. Walton, Jr.; 3 ♂ and 2 ♀ paratypes on *Camellia japonica*, San Antonio, Tex., April 23, 1943, H. C. Glover; 1 ♂ paratype, Sabinal, Tex., May 1910, F. C. Pratt; 1 ♂ paratype on lettuce from Mexico, intercepted at Del Rio, Tex., May 16, 1942.

Type ♂ and 86 paratypes, United States National Museum No. 57983; 5 ♂ and 5 ♀ paratypes returned to Mr. Bottimer.

Mr. Bottimer writes that both of the principal hosts were single plants showing considerable damage and that during daylight the beetles were under leaves at their bases, but that after dark they were feeding on the tender young foliage. Pressed samples of injured leaves show very numerous round or elongate holes from 2 to 5 mm. wide and up to 25 mm. long.

Among the several well-preserved alcoholic samples sent by Mr. Bottimer, a male with nearly full evagination of the internal sac and a pair in coitus are of especial interest as they show structures hitherto not described in the Eumolpinae. The internal sac is illustrated in Figure 1, A, B, C, while dissection of the pair showed the function of this complicated organ. When extended the ovipositor is a very slender long cylindrical, mostly membranous organ, 7 mm. long and about 0.6 mm. in diameter, the vestigial sclerites and spiracle of segment 8 with its basal intersegmental membrane comprising its basal half and the sclerites of segment 9 with its long intersegmental membrane composing its apical half. The genital opening, is between the bases of the apical processes with the anus above it covered by a sclerotized median process of segment 9. When withdrawn in its normal position these two segments telescope one into the other and in this position the basal flanges of the internal sac probably unfold outwardly as holding organs followed gradually by membrane and the large pair of lobes and sclerites in the median portion of the internal sac. These structures envelop and hold the tip of the ovipositor so that continued evagination of the apical half of the internal sac may be within the vagina. This was the position found in the dissected pair, the large lateral processes embracing segment 9 as it was withdrawn inside its basal connecting membrane, with the subspherical apical swelling of the internal sac in the vagina well beyond the base of the sclerites of segment 9, its functional orifice apparently at the orifice of the duct

leading to the *receptaculum seminis*. But when this preparation was cleared the very long and fine sclerotized seminal duct described in a previous paper (*Memorias, Soc. Cubana de Hist. Nat.* 18: 19-20) was not found to be extruded, probably having been withdrawn during the death struggles. This remarkable hairlike tube is present in several subfamilies of Chrysomelidae (cassidines, hispines, eumolpines, chlamisines, cryptocephalines, etc.) but seems to be absent in the typical subfamily Chrysomelinae, as well as in the galerucines and alticines.

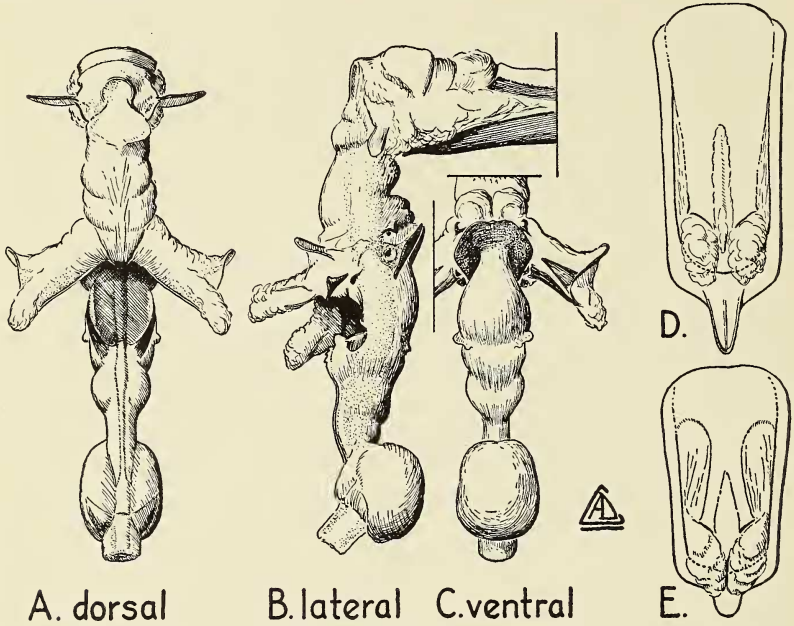


FIG. 1. A, B, C, internal sac of *Rhabdopterus bottimeri*, n. sp. D, official aspect of aedeagus of same with sac invaginated. E, same aspect of *R. praetextus*. Drawn by Arthur D. Cushman.